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ABSTRACT

A program under a performance contract in a Westland, Mich., elementary school designed to improve reading and learning abilities was studied. In a highly mobile community of 75 per cent Appalachian background and generally low level of education, 70-80 per cent of the children tested below grade level on standardized tests. The program had two primary goals: (1) to aid teachers in current and future identification and prevention of reading and learning disabilities, and (2) to increase the achievement level of students in areas of interdisciplinary science-math. Aspects of the contract program included hiring a specially trained teacher and teacher aides, remodeling a classroom, inservice teacher education, and initiation of individually prescribed instruction based on standardized test results. The study compared a group under the contract system and a group in the regular instructional program. Comparison was made using results from a battery of achievement, intelligence, and self-appraisal tests. The results of the tests showed that the contract program was not considered a success in the lower elementary grades, but was successful in the upper elementary grades. Further evaluation was suggested before recommendations for the future of the program were considered. (Tables of data included.) (AL)

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COMPENSATORY EDUCATION: A STUDY OF PREVENTATIVE AND PERFORMANCE CONTRACTED COMPONENTS

Introduction

It has become increasingly evident that educational programs often have not been effective in teaching children so that they reach their potential in basic academic disciplines. During the past several years, increasing amounts of money have been appropriated for the purpose of implementing preventative, remedial, corrective and developmental programs.

Parallel to this development, there has been a demand for accountability within public education because of its inability to deliver on past promises. Recently, this quest for accountability has led many school district to enter into "Performance Contracts."

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During the 1970-71 school year, the Wayne-Westland Community Schools agreed to work with Learning Foundations, Incorporated, in the implementation of a performance contract program in reading at the later elementary grade levels. In addition, a program of inservice education in reading and learning disabilities was conducted for teachers in the primary grades. This program was conducted at Jefferson Elementary School in Westland, Michigan.

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Jefferson School and the Community

Jefferson School is located in the area known as Norwayne. The United States Government built the Norwayne area as a public housing development during World War II. Jefferson School was constructed in 1943 and extensively remodeled in 1967. It presently comprises twenty individual classrooms plus rooms for auxiliary services. It houses approximately 500 youngsters in grades K-6. The following general profile gives some indication of the community served by Jefferson School:

1. Approximately 75% of youngsters have Appalachian background or decendents either 1st, 2nd or 3rd generation.

2. High degree of mobility. The 1969-70 school year showed 89 youngsters leaving the building site, while 80 entered, a total of 169. This is an average of one entry per instructional day of the total instructional year.

3. Approximately 30-40% of youngsters come from broken homes.

4. Approximately 20-30% of youngsters come from homes receiving some form of public assistance.

5. High percentage of homes where both parents work.

6. Approximate education status of parents:

   1% attended college
   35% were high school graduates
   45% attended high school
   15% were eighth grade graduates
   4% less than eighth grade

7. Approximately 70-80% of youngsters score below grade level on standardized tests.

Problem and Significance of Study

It was the purpose of the Jefferson School Program to remediate and prevent educational deficiencies in elementary school children. The accomplishment of this task revolved around two differing components.

The upper elementary program was remedial in nature and built on the concept of a performance contract. The approach involved an extremely heavy use of audio-tutorial teaching machines. Paraprofessionals and a certified teacher were employed to monitor student performance. In addition, incentives that gradually change from extrinsic and tangible, to intrinsic and attitudinal in nature, were given to students and computer prescribed instruction was also used.

The lower elementary Learning Disability Program was preventive in nature and built on an experimental inservice framework of rotating interdisciplinary science and math teachers, which allowed relieved teachers the time for extensive inservice training in reading and learning disabilities.

This program was designed to meet two objectives:

1. To aid teachers in current and future identification and prevention of reading and learning disabilities.

2. To increase the achievement level of students in the areas of interdisciplinary science-math.

The investigation should have value for those studying performance contract programs and preventive education in basic skills.

The Compensatory Education Program

The compensatory education program at Jefferson Elementary School consisted of a two-fold program of inservice education in reading and learning disabilities at the primary level and performance contracting in reading at the later elementary level. The inservice program was conducted by local school district staff with university personnel assistance. The performance contract program was administered by Learning Foundations, Inc.

For inservice education in reading and learning disabilities, primary teachers were released from regular classroom responsibilities a minimum of 1-1/3 hours per day. During this time a specialist in science and mathematics worked with the primary children in their regular classroom. Grade level teachers formed a development team and met together on a daily basis. They were joined by the building principal and the building reading specialist. Once a week the various teams were augmented to include the district-wide coordinator of language arts and reading and two university consultants who specialized in reading and learning disabilities and program development. The agenda for a typical weekly meeting focused on developmental activities relating to the purposes of the laboratory and which could further be developed and implemented during the succeeding week under the supervision of the building reading specialist and the principal.

The program was under the direct supervision of the building principal, the building reading specialist and the coordinator of language arts and reading for the Wayne-Westland Community Schools was available one day a week for augmented team meetings.

The performance contract was a corrective-developmental reading program for grades 3-6. The Wayne-Westland Community Schools contracted with Learning Foundations, Incorporated, to establish a remedial learning center for Jefferson School. From a pool of approximately 200 youngsters, 150 children were selected to participate. The children selected were those demonstrating a reading comprehension deficiency according to a standardized test. Learning Foundations administered a testing and evaluative process to each of the 150 students to determine the specific reading difficulty of each student. These tests and evaluative procedures were basically standardized achievement tests; however, they were different than those given by the Wayne-Westland Community Schools. The results were fed through a computer and a performance profile plus an individual study prescription were returned for each student.

Initial motivation for each student was provided by an individual incentive program awarding students for achieving success through progress in prompt attendance, speed and comprehension. As students progress, the incentives changed from the extrinsic and tangible to intrinsic and attitudinal. (NOTE: The use of extrinsic incentives was initiated; however, it was discontinued shortly after the beginning of the program.) The alternative aim of the program was to have the youngsters learning for the sheer joy of learning itself.

By the terms of the contract, the Wayne-Westland Community Schools remodeled a Jefferson classroom to conform to specifications required by the contract. The room has been repainted, carpeted, furnished with new drapes and made aesthetically

appealing. It now contains eighteen (18) individual study carrels and has small group study tables and a wide variety of multi-media learning materials.

The one hundred fifty selected youngsters were divided into five groups of thirty (30) students. Each group of thirty students received fifty minutes of individually prescribed instruction per day. Instruction was under the direction of a selected Wayne-Westland Community Schools teacher specially trained for this position by the Wayne-Westland Community Schools and Learning Foundations, Incorporated. This person was assisted by five (5) specially trained teacher aides, all previously experienced in child care. The program provided an adult-pupil ratio of six to one.

Design of Study

The subjects in this study constitute the entire population of one target school (Jefferson) and a selected sample of comparison students at a second target school (Lincoln). At Jefferson School, all students participated in the lower elementary program. In contrast, only students currently scoring below grade level in grades 3-6 attended the Learning Center at Jefferson School.

Comparison students at grades K-2 were randomly selected from class rosters. Students at grades 3, 4 and 6 were chosen based on below grade level reading ability.

Thus, the total number of students involved in the experimental and comparison schools was as seen in Figure 1.

Figure 1

Experimental		Comparison	
Total Number of Students:		Total Number of Students:	
K	100	K	70
1	90	1	70
2	85	2	70
3	80	3	70
4	75	4	80
5	70	5	85
6	70	6	75

For the purposes and objectives of this study, a comparison elementary school from the same target area was chosen. The study, as designed, determined payment to the contracting company (Learning Foundations) and at the same time, was differentially predictive; that is, contrasting methodologies were compared one to another, between two selected schools in order to determine whether there would be any significant differences resulting from the contrasting methods employed.

The project was structured prior to the week of February 15, 1971, and pre-testing began February 18, 1971.

With fourteen (14) weeks allowed for the duration of the program, June 2, 1971, concluded the period. Evaluation instruments included the Metropolitan Achievement Test, the Lorge Thorndike Intelligence Test, the Cognitive Abilities Test and the Self-Appraisal Inventory.

The analysis and interpretation of data was designed to accomplish five major purposes:

1. To determine if the contracted program was a more effective approach than our current instructional curriculum

2. To measure the effectiveness of the lower elementary inter-disciplinary math, science and learning disability program.

3. To measure the effect the program had on self-concept and the tendency to be absent from school.

4. To determine the relationship of mental ability to achievement.

5. To determine payment to Learning Foundations for the contracted program.

Prior to analysis, all information was coded and punched on data cards. The following programs from the series in the Wayne-Westland Community Schools' files were used in this study: (1) T-Test Analysis, (2) Product Moment Correlation and (3) Chi-Square.

Results of the Study

The effectiveness of the lower elementary reading and learning disabilities program is difficult to index at this point in time. The program could have had the immediate effect but will most likely have a more pronounced long range impact. However, some information was gained as to its immediate effect. In terms of achievement, the comparison school did significantly better in areas considered relevant to the experimental lower elementary program at grades K-1 and no significant differences were found at the second grade. When considering the clustered by ability achievement results, it would appear that both programs were equally effective at this point in time, for above and below average students. The program had no effect on self-appraisal characteristics. As expected, there was a consistent

correlation between mental ability and achievement. The subjective feelings of involved educators indicated a significant positive feeling towards the inservice framework, rotating teacher concept and the new instructional materials made available.

The upper elementary contracted reading program was evaluated from various vantage points and the following is a summary.

In terms of grade three achievement in reading or related areas, a significant difference between groups was found in favor of the contracted program in the spelling subtest.

At the fourth grade level, the analysis of achievement in reading or related areas indicates no significant differences between groups.

The situation at the fifth grade level also indicates no significant differences in reading or related areas.

In contrast, the sixth grade level in reading or related areas indicates significant differences for the experimental program in word knowledge and reading.

When considering the clustered by ability achievement results for students in reading related areas, it appears that for the above average student the program at either school is equally effective. However, the performance contracted program was designed to demonstrate its effectiveness with the lower ability students in reading and related areas. This result was not verified by analysis procedures.

In considering self-appraisal results between schools, no significant effect on self-appraisal was found at grades three through five. In contrast, the sixth grade results indicate significant differences for comparison subjects.

As expected, there was a consistent correlation between mental ability and achievement.

Analysis of attendance rates indicates consistent rates between comparison and experimental subjects at grade three. However, the rates for grades four to six consistently show a difference in favor of students attending the performance contract learning center.

The subjective feelings in general of involved educators indicated a significant positive feeling towards the learning center, consultant staff, the use of learning center methods and the concept of performance contracting. However, professional staff felt significantly negative about teacher involvement in planning, pre-planning and the use of standardized tests for evaluation.

Another point for effectiveness consideration can be based upon pay off information. Pay off was determined on the basis of improvement in reading comprehension. The grade level pay off amounts were:

Grade 3	=	$ 42.50
Grade 4	=	297.50
Grade 5	=	492.50
Grade 6	=	650.00

The pay off rate for post testing was $1,482.50 out of a maximum of $10,500 for total pay off. Students completing the program must have grown .75 of the grade level in order for Leaming Foundations to receive minimum pay off. This pay off was determined from the pre to post grade equivalent scores on the Metropolitan Achievement subtest measuring reading comprehension.

Conclusion

The lower elementary program at this point in time was not a complete success, nor was it a failure considering all factors. However, it is our feeling that it will have a more pronounced long range impact.

In contrast, the information is more supportive of the upper elementary contracted program. The achievement data supports our concept of contracted learning at two grade levels (three and six), in the areas of spelling, word knowledge and reading comprehension. In fact, one could hypothesize based on these results that it is best to measure supportive areas (word knowledge, spelling, etc.) rather than initial focus on reading comprehension. However, more research is needed to substantiate this supposition. A more significant result may have occured had some form of criterion assessment been established or a learning center program more consistent with objectives of our assessment procedures.

It appears that for the above average student at either school, the programs are equally effective. Another consideration could be that the above average student learns efficiently in any case. The program's effectiveness in terms of lower ability students was not verified by analysis procedures. It is our feeling that further evaluation will

reverse the aforementioned result.

A criticism of performance contracting has been that the procedure may be down-grading to children. In fact, our hypothesis was that the reverse would occur because of the greater potential for individual success. It is quite clear that the contracting framework is not a negative influence on self characteristics. By the same token, our results do not indicate a positive effect on the self-appraisal inventory. It is our belief that further research is needed here since the affective domain is so difficult to measure. Possibly a more effective way to measure this domain would be through criteria observation rather than formalized testing structure.

As expected, there was a consistent correlation between mental ability and achievement.

The attendance rates were supportive of the contracted program at grades four to six.

The subjective feelings of involved educators were overwhelmingly supportive in a significantly positive manner. The only points of significantly negative sentiment were stated in regard to teacher involvement, pre-planning and the use of standard-ized tests for evaluation.

If one considers pay off rates for effectiveness demonstration, the results are not totally supportive. The pay off rate for post testing was $1,482.50.

In summary, results at this time are not totally positive for the lower elementary program. However, the contracted framework results were supportive of the concept.

Therefore, further evaluation considering recommendations should be undertaken.

Recommendations

The proposals listed below are recommended for further evaluation:

1. A more extensive experiment over a longer period of time would initiate a stronger test of the compensatory education program.

2. The use of a criterion oriented test or tests with objectives more consistent with program procedures.

3. The possible use of an observational inventory in order to broaden the evaluation base.

4. The elimination of grade equivalents for payment determinations.

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